

In The Claims

1. (Previously Presented) A milking unit cylinder comprising:
a flexible element;
~~at least one~~ a sensor element which detects a substantial weight ~~on~~ release from the
flexible element to trigger a start signal for a milking process; and
a rapid ventilation valve in communication with the sensor element, wherein the rapid
ventilation valve moves between a closed position when in a stand-by mode and
an open position when a start signal is triggered.
2. (Currently Amended) The milking unit cylinder according to claim 1, wherein the sensor
element emits a start signal as the weight ~~on~~ release from the flexible element exceeds a
predetermined threshold value.
3. (Previously Presented) The milking unit cylinder according to claim 2, wherein the
predetermined threshold value is variable.
4. (Currently Amended) The milking unit cylinder according to claim 1, wherein the sensor
element which detects the a substantial weight release from the flexible element, triggers a start
for a milking process at a predetermined threshold weight release value that is independent of ~~an~~
a dairy milking unit operating vacuum.
5. (Previously Presented) The milking unit cylinder according to claim 1, and further
comprising:
a biasing element disposed to move the rapid ventilation valve into a closed position.
6. (Currently Amended) The milking unit cylinder according to claim 5, wherein the
predetermined threshold value is ~~influenced by~~ relative to a force applied by the biasing element.

7. (Previously Presented) The milking unit cylinder according to claim 1, wherein the flexible element is coupled to a movable element.
8. (Previously Presented) The milking unit cylinder according to claim 1, wherein the flexible element is configured as a chain.
9. (Previously Presented) The milking unit cylinder according to claim 1, wherein the flexible element is coupled to a milking unit.
10. (Previously Presented) The milking unit cylinder according to claim 1, wherein at least one sensor element is selected from a group of sensors consisting of: load measuring means, proximity switches, magnetic limiting switches, dry reed contact switches, expansion measuring strips, magnetic, inductive, capacitive sensors and resistance sensors and combinations thereof.
11. (Previously Presented) The milking unit cylinder according to claim 1, wherein at least a portion of the sensor element is mounted within the cylinder.
12. (Currently Amended) The milking unit cylinder according to claim 1, wherein the sensor element ~~is contactless~~ is spaced apart from the flexible element.
13. (Previously Presented) A milking unit cylinder according to claim 1, wherein the rapid ventilation valve comprises a closing element which is movable between an open position and a closed position.
14. (Previously Presented) The milking unit cylinder according to claim 1, wherein the rapid ventilation valve defines a control port.
15. (Canceled)
16. (Canceled)

17. (Currently Amended) The milking unit cylinder according to claim 14, wherein the rapid ventilation valve comprises:

a membrane for moving between a control port open position and a control port closed position; and
a biasing ~~means~~ element that biases the membrane toward the control port closed position.

18. (Currently Amended) The milking unit cylinder according to claim 17, wherein the membrane in the control port open position permits air to flow ~~from a rapid ventilation aperture~~ into the milking unit cylinder.

19. (Previously Presented) The milking unit cylinder according to claim 17, wherein the membrane is disposed in the milking unit cylinder to define an interior space; and the milking unit cylinder further comprises a piston mounted in the interior space.

20. (Currently Amended) The milking unit cylinder according to claim 19, ~~and further comprising a membrane wherein the~~ control port is mounted on the side of the membrane that is opposite the piston.

21. (Previously Presented) The milking unit cylinder according to claim 20, wherein the membrane can be placed in a ventilation position by applying atmospheric pressure in the interior space and by applying subpressure to the membrane control port.

22. (Canceled)

23. (Canceled)

24. (Withdrawn) A method for automatically starting a milking process comprising the steps of:

holding a milking unit at a first position;
triggering a start signal; and
rapidly ventilating a milking unit cylinder.

25. (Withdrawn) The method according to claim 24 and further comprising the step of lifting the milking unit to a second position to trigger a start signal.

26. (Withdrawn) The method according to claim 24 wherein the step of:
rapidly ventilating the milking unit cylinder comprises the step of:
ventilating gas through a plurality of ventilation apertures.

27. (Canceled)

28. (Canceled)

29. (New) A milking machine cylinder comprising:

a flexible element;

a sensor element which detects a substantial weight release from the flexible
element to trigger a start signal for a milking process;

a rapid ventilation valve in communication with the sensor element, wherein the rapid
ventilation valve defines a control port, and wherein the rapid ventilation valve
comprises:

a membrane for moving between a control port open position and a control port
closed position; and

a biasing element that biases the membrane toward the control port closed
position.

30. (New) The milking machine cylinder of claim 29, wherein the biasing element is a spring.
31. (New) The milking machine cylinder of claim 29, wherein the biasing element is a weight.
32. (New) The milking unit cylinder according to claim 29, and further comprising:
a biasing element disposed to move the rapid ventilation valve into a closed position.
33. (New) The milking unit cylinder according to claim 29, wherein the membrane is disposed in the milking unit cylinder to define an interior space; and the milking unit cylinder further comprises a piston mounted in the interior space.
34. (New) The milking unit cylinder according to claim 29, wherein the membrane can be placed in a ventilation position by applying atmospheric pressure in the interior space and by applying subpressure to the membrane control port.
35. (New) The milking machine cylinder of claim 29, wherein the sensor element is a magnetic limit switch.
36. (New) The milking machine cylinder of claim 29, wherein the sensor element is a proximity switch.
37. (New) The milking machine cylinder of claim 29, wherein the sensor element is a reed magnetic switch.
38. (New) The milking machine cylinder of claim 29, wherein the sensor element is a magnetic limit switch.
39. (New) The milking machine cylinder of claim 29, wherein the sensor element is a magnetic limit switch with a displaceable magnet.